Amendments to the Claims

The following listing of claims replaces all prior versions and listings of claims in this application:

1. (Original) A biocompatible matrix comprising hyaluronic acid and laminin further comprising a bioactive compound or drug selected from the group consisting of a hormone, a growth factor, an antioxidant, a proteolytic enzyme, an anti-fibrotic agent, a chemotherapeutic anti-proliferative agent, a coagulative agent, an anti-coagulative agent, an immunomodulator, or a growth inhibitor.

2. (Original) The biocompatible matrix of claim 1 which is cross-linked by an exogenous cross-linking agent to form a combined gel.

3. (Original) The biocompatible matrix of claim 2 wherein the exogenous cross-linking agent is a sugar.

4. (Original) The biocompatible matrix of claim 1 wherein the gel has a viscosity of 4-48 centipoise.

5. (Original) The biocompatible matrix of claim 1 comprising 0.05 % to 5% of hyaluronic acid.

6. (Original) The biocompatible matrix of claim 1 comprising 0.005 % to 0.5 % of laminin.

7. (Original) The biocompatible matrix of claim 1 wherein the growth factor is selected from the group consisting of brain-derived neurotrophic factors (BDNF), nerve growth factors (NGF), insulin-like growth factor-1 (IGF1), leukemia inhibitory factor (LIF), pifithrin-α and an antisense oligonucleotides of p53.

8. (Original) The biocompatible matrix of claim 1 wherein the antioxidant is selected from the group consisting of ascorbic acid, dehydroepiandrosterone (DHEA), melatonin, N-acetyl-L-cysteine and retinoic acid.

9. (Original) The biocompatible matrix of claim 1 further comprising a structural component selected from the group consisting of an extracellular matrix component, a natural polymer, a synthetic polymer, or a mixture thereof.

10. (Currently Amended) [[A]] The biocompatible matrix of claim 1 further comprising a cell culture comprising a plurality of cells other than cells of a neuronal explant whereas the cells are cultured in or upon [[a]] the matrix ~~comprising hyaluronic acid and laminin cross-linked~~ to form a combined gel.

11. (Currently Amended) The biocompatible matrix ~~cell culture~~ of claim 10 comprising a plurality of cell types.

12. (Currently Amended) The biocompatible matrix ~~cell culture~~ of claim 10 comprising a cloned cell type.

13. (Currently Amended) The biocompatible matrix ~~cell culture~~ of claim 10 comprising a bioengineered type.

14. (Currently Amended) The biocompatible matrix ~~cell culture~~ of claim 10 comprising an autologous cell type.

15. (Currently Amended) The biocompatible matrix ~~cell culture~~ of claim 10 comprising stem cells.

16. (Currently Amended) The biocompatible matrix ~~cell culture~~ of claim 15 comprising an embryonic stem cell type.

17. (Currently Amended) The biocompatible matrix ~~cell culture~~ of claim 15 comprising an adult stem cell type.

18. (Currently Amended) The biocompatible matrix ~~cell culture~~ of claim 17 comprising a bone-marrow stem cell type.

19. (Currently Amended) The biocompatible matrix ~~cell culture~~ of claim 10 where the cells are cultured on the exposed surface of a combined hyaluronic acid laminin gel.

20. (Currently Amended) The biocompatible matrix ~~cell culture~~ of claim 19 comprising endothelial cell types.

21. (Original) An implant comprising a biocompatible matrix according to claim 1.

22. (Currently Amended) An implant comprising a biocompatible matrix ~~cell culture~~ according to claim 10.

23. (Currently Amended) A method for preparing a biocompatible matrix according to claim 1 to be implanted in a human subject, which comprises:

hydrating a hyaluronic acid or salt or hyaluronan;

selecting a laminin solution; and

cross-linking the hydrated hyaluronan and laminin, with the optional addition bioactive or structural components, to form a combined gel.

24. (Original) The method of preparing the biocompatible matrix of claim 23 which further comprises shaping the matrix.

25. (Original) The method of claim 23 which further comprises culturing or embedding cells in or on the gel.

26. (Original) The method of claim 25 wherein the cultured cells are adherent on an exposed surface of the combined gel.

27. (Original) The method of claim 26 wherein the cultured cells are endothelial cells.

28. (Original) The method of claim 23 further comprises supplementing the gel with bioactive compound or drug selected from the group consisting of a hormone, a growth factor, an anti-oxidant, a proteolytic enzyme, an anti-fibrotic agent, a chemotherapeutic anti-proliferative agent, a coagulative agent, an anti-coagulative agent, an immunomodulator, or a growth inhibitor.

29. (Original) The method of claim 28 wherein the growth factor is selected from the group consisting of brain-derived neurotrophic factors (BDNF), nerve growth factors (NGF), insulin-like growth factor-1 (IGF1), leukemia inhibitor factor (LIF), pifithrin-α. and antisense oligonucleotides of p53.

30. (Original) The method of claim 27 wherein the antioxidant is selected from the group consisting of ascorbic acid, dehydroepiandrosterone (DHEA), melatonin, N-acetyl-L-cystein and retinoic acid.

31. (Currently Amended) A method for transplanting cells other than neuronal cells to an individual in need thereof, comprising the step of transplanting in the individual an implant according to claim 22~~comprising cells in or on a biocompatible matrix comprising hyaluronic acid and laminin cross-linked to form a combined gel~~.

32. (Original) A medical device comprising the biocompatible matrix of claim 1, and further comprising endothelial cells attached to an exposed surface of the gel.

33. (Original) The medical device of claim 32 wherein the biocompatible matrix forms a coating on the exposed surfaces of the device.

34. (Original) The medical device of claim 32 further comprising a bioactive compound or drug.

35. (Original) The medical device of claim 33 further comprising a bioactive compound or drug.